

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method for decoding a bitstream comprising the steps of:

(A) receiving a first encoded bitstream, wherein said first encoded bitstream comprises an intra-only frame picture encoded bitstream comprising a frame header and alternating macroblock rows, with each macroblock row containing encoded data for a plurality of vertical lines from a single respective field;

(B) generating a first field header and a second field header in response to said frame header of said first encoded bitstream, wherein said first field header comprises a copy of said frame header modified to signal a first field picture and said second field header comprises a copy of said frame header modified to signal a second field picture;

(C) storing said first field header and macroblock rows containing the encoded data for the plurality of vertical lines from a first field of the frame picture in a first buffer and storing said second field header and macroblock rows containing the encoded data for the plurality of vertical lines from a second field of the frame picture in a second buffer, wherein the encoded data for the plurality of vertical lines contained in each macroblock row is ~~unchanged~~ a copy of the encoded data for the

plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream; and

(D) generating a second encoded bitstream comprising (i) said first field header, (ii) said macroblock rows containing the encoded data for the plurality of vertical lines from said first field of the frame picture, (iii) said second field header and (iv) said macroblock rows containing the encoded data for the plurality of vertical lines from said second field of the frame picture, wherein said second encoded bitstream comprises an intra-only field picture encoded bitstream and is decodable as interlaced field pictures using an MPEG-2 compliant decoder.

2. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein said generating steps further comprise:

copying said frame header from said first bitstream into a first field header portion of said first buffer and a second field header portion of said second buffer; and

modifying (i) a portion of said first field header portion to indicate a top field picture and (ii) a portion of said second field header portion to indicate a bottom field picture.

3. (PREVIOUSLY PRESENTED) The method according to claim 2, wherein said generating steps further comprise:

copying a plurality of said macroblock rows from said first bitstream to said first buffer and said second buffer, wherein said copying alternates between said first and said second buffers after each macroblock row.

4. (PREVIOUSLY PRESENTED) The method according to claim 3, wherein said generating steps further comprise:

adjusting a slice number of each macroblock row in said first buffer and said second buffer to increment consecutively.

5. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein step (D) further comprises:

writing (i) said first field header, (ii) said macroblock rows containing the encoded data for the plurality of vertical lines from said first field of the frame picture, (iii) said second field header and (iv) said macroblock rows containing the encoded data for the plurality of vertical lines from said second field of the frame picture consecutively to said second encoded bitstream.

6. (PREVIOUSLY PRESENTED) The method according to claim 4, wherein step (D) comprises:

writing said first buffer followed by said second buffer to said second encoded bitstream.

7. (PREVIOUSLY PRESENTED) The method according to claim 1, further comprising the step of:

presenting said second encoded bitstream to a video decoder.

8. (ORIGINAL) The method according to claim 7, wherein said video decoder is configured to support a field picture mode.

9. (PREVIOUSLY PRESENTED) The method according to claim 7, further comprising:

decoding said second encoded bitstream into a first decoded field picture and a second decoded field picture; and

5 presenting even field lines on a television monitor in response to said first decoded field picture and odd field lines on said television in response to said second decoded field picture.

10. (CURRENTLY AMENDED) An apparatus comprising:

means for receiving a first encoded bitstream, wherein said first encoded bitstream comprises an intra-only frame picture encoded bitstream comprising a frame header and alternating
5 macroblock rows, with each macroblock row containing encoded data for a plurality of vertical lines from a single respective field;

means for generating a first field header and a second field header in response to said frame header of said first encoded

bitstream, wherein said first field header comprises a copy of said
10 frame header modified to signal a first field picture and said
second field header comprises a copy of said frame header modified
to signal a second field picture;

means for storing said first field header and macroblock
rows containing the encoded data for the plurality of vertical
15 lines from a first field of the frame picture in a first buffer and
storing said second field header and macroblock rows containing the
encoded data for the plurality of vertical lines from a second
field of the frame picture in a second buffer, wherein the encoded
data for the plurality of vertical lines contained in each
20 macroblock row is unchanged a copy of the encoded data for the
plurality of vertical lines contained in a corresponding macroblock
row in the first encoded bitstream; and

means for generating a second encoded bitstream
comprising (i) said first field header, (ii) said macroblock rows
25 containing the encoded data for the plurality of vertical lines
from said first field of the frame picture, (iii) said second field
header and (iv) said macroblock rows containing the encoded data
for the plurality of vertical lines from said second field of the
frame picture, wherein said second encoded bitstream comprises an
30 intra-only field picture encoded bitstream and is decodable as
interlaced field pictures using an MPEG-2 compliant decoder.

11. (CURRENTLY AMENDED) An apparatus comprising:
a circuit configured to

(i) receive a first encoded bitstream, wherein said first encoded bitstream comprises an intra-only frame picture encoded bitstream comprising a frame header and alternating macroblock rows, with each macroblock row containing encoded data for a plurality of vertical lines from a single respective field,

(ii) generate a first field header and a second field header in response to said frame header of said first encoded bitstream, wherein said first field header comprises a copy of said frame header modified to signal a first field picture and said second field header comprises a copy of said frame header modified to signal a second field picture;

(iii) store said first field header and macroblock rows containing the encoded data for the plurality of vertical lines from a first field of the frame picture in a first field buffer and store said second field header and macroblock rows containing the encoded data for the plurality of vertical lines from a second field of the frame picture in a second field buffer, wherein the encoded data for the plurality of vertical lines contained in each macroblock row is ~~unchanged~~ a copy of the encoded data for the plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream, and

(iv) generate a second encoded bitstream comprising

25 (a) said first field header, (b) said macroblock rows containing the encoded data for the plurality of vertical lines from said first field of the frame picture, (c) said second field header and (d) said macroblock rows containing the encoded data for the plurality of vertical lines from said second field of the frame

30 picture, wherein said second encoded bitstream comprises an intra-only field picture encoded bitstream and is decodable as interlaced field pictures using an MPEG-2 compliant decoder.

12. (PREVIOUSLY PRESENTED) The apparatus according to claim 11, wherein said circuit comprises:

one or more memory devices containing said first field buffer and said second field buffer;

5 an output circuit coupled to said one or more memory devices and generating said second encoded bitstream; and

a transform circuit coupled to said one or more memory devices and said output circuit, and configured to (i) copy said frame header from said first encoded bitstream into a first field header portion of said first field buffer and a second field header

10 portion of said second field buffer.

13. (ORIGINAL) The apparatus according to claim 12, wherein said transform circuit is further configured to:

modify (i) a portion of said first field header portion
to indicate a top field picture and (ii) a portion of said second
5 field header portion to indicate a bottom field picture.

14. (PREVIOUSLY PRESENTED) The apparatus according to
claim 12, wherein said transform circuit is further configured to:

copy a plurality of said macroblock rows from said first
encoded bitstream to said first field buffer and said second field
5 buffer, wherein said copying alternates between said first and said
second field buffers after each macroblock row.

15. (PREVIOUSLY PRESENTED) The apparatus according to
claim 14, wherein said transform circuit is further configured to:

adjust a slice number of each macroblock row in said
first field buffer and said second field buffer to increment
5 consecutively.

16. (PREVIOUSLY PRESENTED) The apparatus according to
claim 12, wherein said transform circuit is further configured to:

write the contents of said first field buffer and the
contents of said second field buffer consecutively to said second
5 encoded bitstream.

17. (PREVIOUSLY PRESENTED) The apparatus according to claim 11, further comprising:

a video decoder circuit configured to receive said second encoded bitstream.

18. (ORIGINAL) The apparatus according to claim 17, wherein said video decoder circuit is further configured to support a field picture mode.

19. (PREVIOUSLY PRESENTED) The apparatus according to claim 17, wherein said video decoder circuit is further configured to:

5 decode said second encoded bitstream into a first decoded field picture and a second decoded field picture; and

present even field lines on a television monitor in response to said first decoded field picture and odd field lines on said television in response to said second decoded field picture.

20. (PREVIOUSLY PRESENTED) The apparatus according to claim 11, wherein said first encoded bitstream comprises an intra-only MPEG-2 frame picture stream.

21. (PREVIOUSLY PRESENTED) The apparatus according to claim 16, wherein said transform circuit is further configured to:

write sequence-related information from said first encoded bitstream directly to said second encoded bitstream.

22. (PREVIOUSLY PRESENTED) The apparatus according to claim 21, wherein said transform circuit modifies one or more portions of sequence-related headers from said first encoded bitstream prior to output in said second encoded bitstream.